

■ Features :

- Universal AC input / Full range (up to 295VAC)
- High efficiency up to 89%
- Protections: Short circuit / Over current / Over voltage / Over temperature
- Cooling by free air convection
- Built-in constant current limiting circuit with adjustable OCP level
- Fully isolated plastic case with IP64 level
- Built-in active PFC function
- IP64 design for indoor or outdoor installations
- Pass LPS
- Class 2 power unit
- 100% full load burn-in test
- High reliability
- Suitable for LED lighting and moving sign applications (Note.2)
- Suitable for dry / damp locations
- Compliance to worldwide safety regulations for lighting

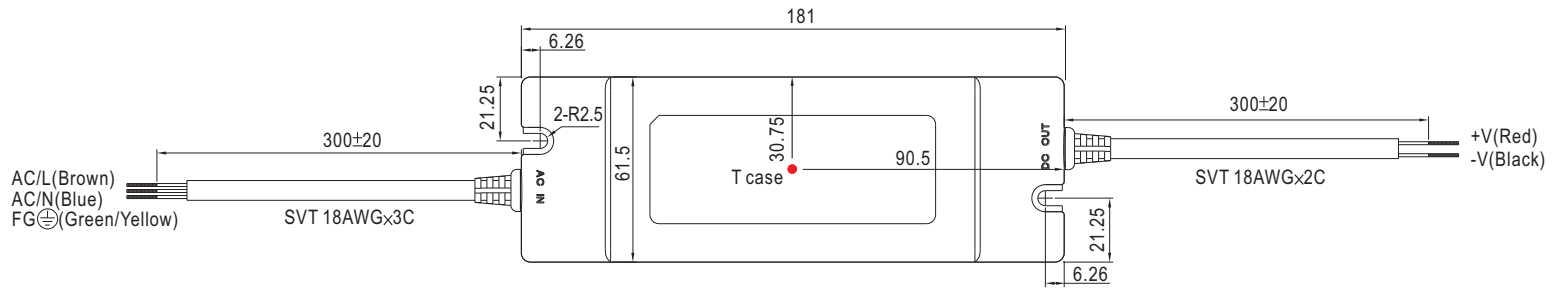


SPECIFICATION

OUTPUT	DC VOLTAGE				24V				
	CONSTANT CURRENT REGION Note.6				16.8 ~24V				
	RATED CURRENT				2.5A				
	CURRENT RANGE				0 ~ 2.5A				
	RATED POWER				60W				
	RIPPLE & NOISE (max.) Note.2				2.7Vp-p				
	VOLTAGE ADJ. RANGE Note.5				24 ~ 26V				
	Can be adjusted by internal potentiometer SVR1								
	CURRENT ADJ. RANGE Note.5					3% ~ -25%. Can be adjusted by internal potentiometer SVR2			
	VOLTAGE TOLERANCE Note.3					±10%			
LINE REGULATION					±3.0%				
LOAD REGULATION					±5.0%				
SETUP TIME					1500ms / 230VAC 3000ms / 115VAC at full load				
INPUT	VOLTAGE RANGE Note.4				90 ~ 295VAC 127 ~ 417VDC				
	FREQUENCY RANGE				47 ~ 63Hz				
	POWER FACTOR (Typ.)				PF>0.98/115VAC, PF>0.9/230VAC, PF>0.9/277VAC at full load (Please refer to "Power Factor Characteristic" curve)				
	EFFICIENCY (Typ.)					87%			
	AC CURRENT (Typ.)				0.8A/115VAC 0.4A/230VAC 0.3A/277VAC				
	INRUSH CURRENT (max.)					COLD START 35A(twidth=45µs measured at 50% Ipeak) at 230VAC			
	LEAKAGE CURRENT					<0.75mA / 240VAC			
PROTECTION	OVER CURRENT				95 ~ 110%				
					Protection type : Constant current limiting, recovers automatically after fault condition is removed				
	SHORT CIRCUIT				Hiccup mode, recovers automatically after fault condition is removed.				
	OVER VOLTAGE					28 ~ 32V			
					Protection type : Shut down o/p voltage, re-power on to recover				
OVER TEMPERATURE					95°C ±10°C (TSW1) detect on heatsink of power transistor				
					Protection type : Shut down o/p voltage, recovers automatically after temperature goes down				
ENVIRONMENT	WORKING TEMP.				-30 ~ +50°C (Refer to "Derating Curve")				
	WORKING HUMIDITY				20 ~ 95% RH non-condensing				
	STORAGE TEMP., HUMIDITY				-40 ~ +80°C, 10 ~ 95% RH				
	TEMP. COEFFICIENT				±0.03%/°C (0 ~ 50°C)				
	VIBRATION					10 ~ 500Hz, 2G 12min./1cycle, period for 72min. each along X, Y, Z axes			
SAFETY & EMC	SAFETY STANDARDS				UL879, UL1310, UL8750, CSA C22.2 No. 207-M89(except for 48V), TUV EN61347-1, EN61347-2-13 independent, CAN/CSA C22.2 No. 223-M91(except for 48V), CSA C22.2 No. 250.0-08(except for 48V), IP64, J61347-1, J61347-2-13 approved ; design refer to UL60950-1				
	WITHSTAND VOLTAGE				I/P-O/P:3.75KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC				
	ISOLATION RESISTANCE				I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH				
	EMC EMISSION					Compliance to EN55015, EN55022 (CISPR22) Class B, EN61000-3-2 Class C (≥ 75% load) ; EN61000-3-3			
	EMC IMMUNITY					Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024,EN61547, light industry level, criteria A			
OTHERS	MTBF				497.8K hrs min. MIL-HDBK-217F (25°C)				
	DIMENSION				181*61.5*35mm (L*W*H)				
	PACKING				0.5Kg; 24pcs/13Kg/0.75CUFT				
NOTE	<ol style="list-style-type: none"> 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. Derating may be needed under low input voltage. Please check the static characteristics for more details. 5. Output voltage can be adjusted through the SVR1 on the PCB ; limit of output constant current level can be adjusted through the SVR2 on the PCB. 6. Constant current operation region is within 70% ~100% rated output voltage. This is the suitable operation region for LED related applications, but please reconfirm special electrical requirements for some specific system design. 7. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again. 8. Direct connecting to LEDs is suggested, but is not suitable for using additional drivers. 								

Mechanical Specification

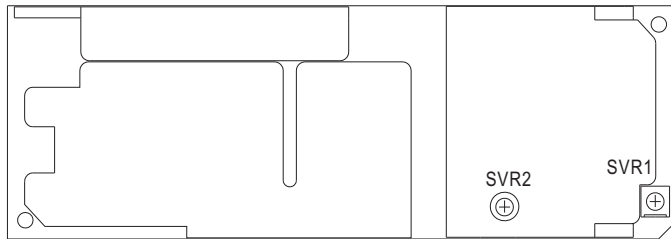
Case No.960A Unit:mm



※ T case: Max. Case Temperature.



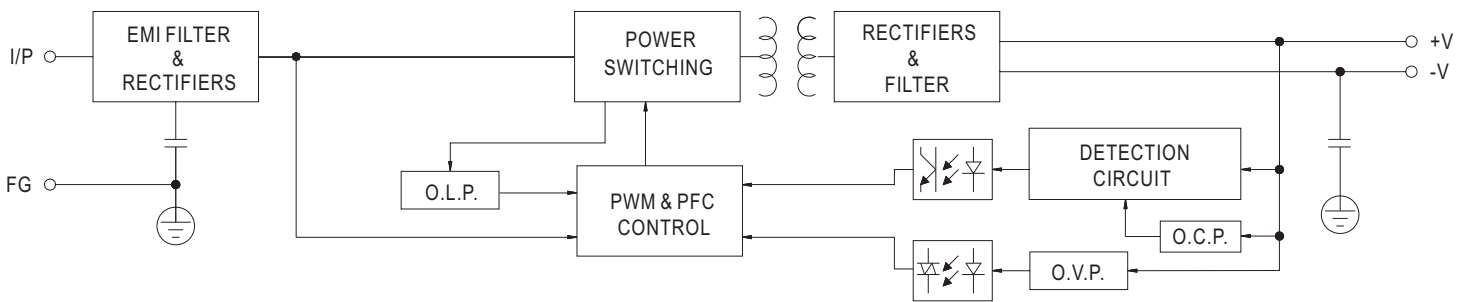
Output voltage and current adjustment : remove the upper case and adjust through SVR1 & SVR2 shown in the diagram.



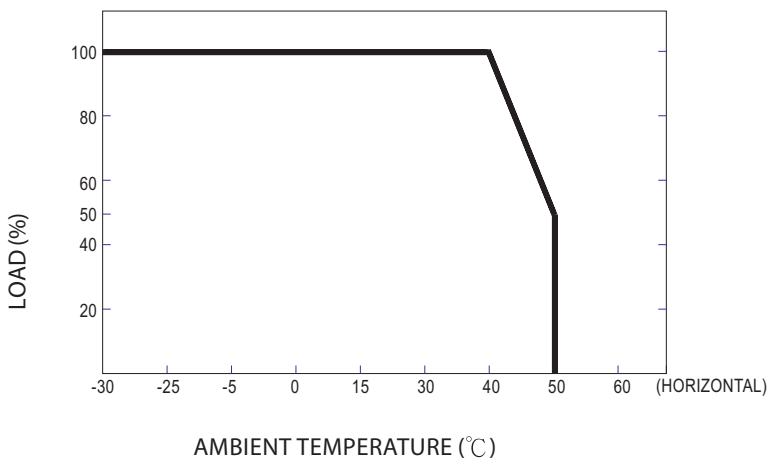
SVR1	Output voltage adjustment
SVR2	Output current adjustment

Block Diagram

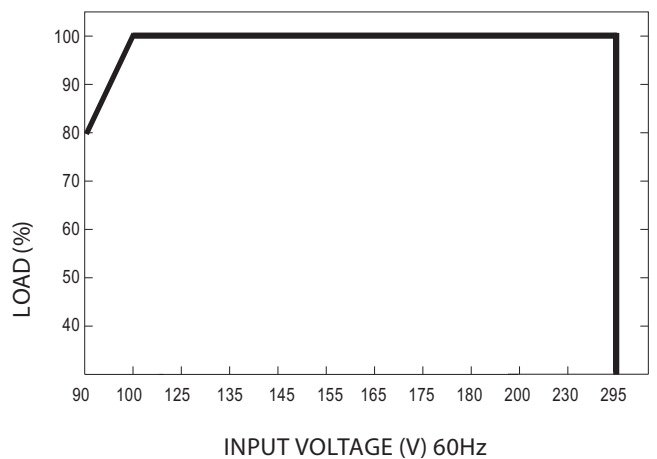
fosc : 90KHz(115VAC)
120KHz(230VAC)



Derating Curve

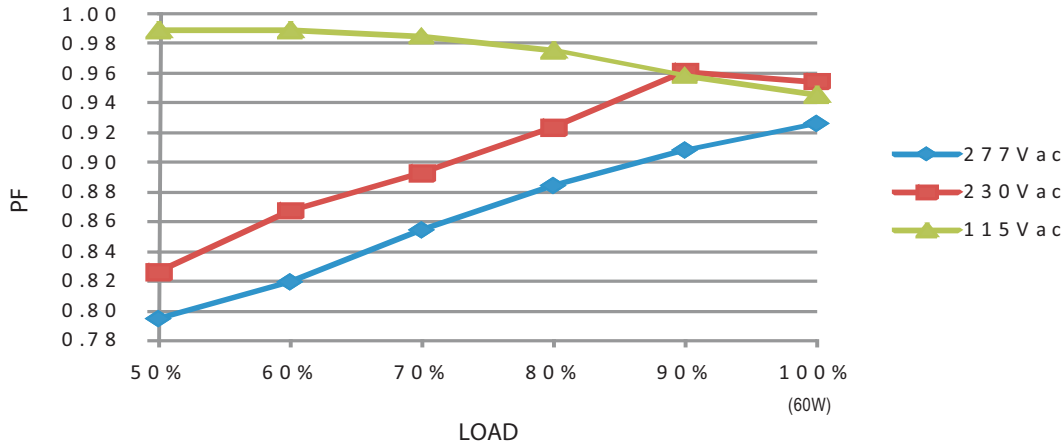


Static Characteristics



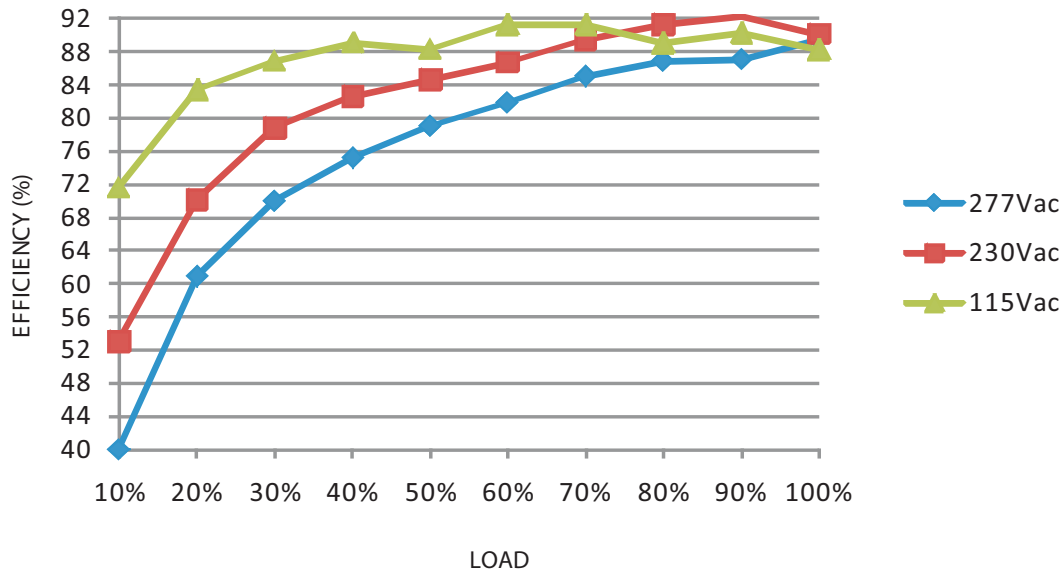
Power Factor Characteristic

Constant Current Mode



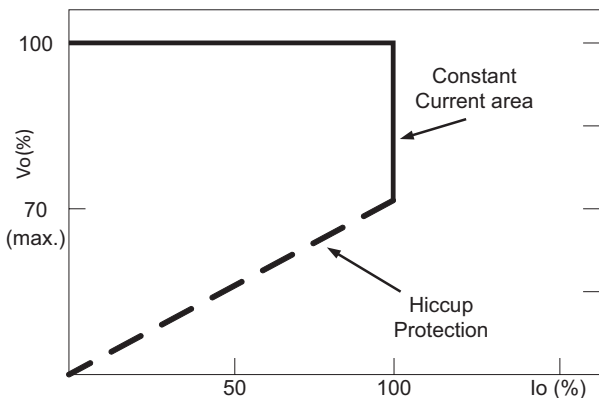
EFFICIENCY vs LOAD

DPL-60 T possess superior working efficiency that up to 89% can be reached in field applications.



DRIVING METHODS OF LED MODULE

This LED power supply is suggested to work in constant current mode area (CC) to drive the LEDs.



Typical LED power supply I-V curve